



(19)

BEST AVAILABLE COPY

(11) Publication number: 02

Generated Document.

## PATENT ABSTRACTS OF JAPAN

(21) Application number: 63166151

(51) Intl. Cl.: C23C 14/46

(22) Application date: 04.07.88

(30) Priority:

(43) Date of application  
publication: 18.01.90(84) Designated contracting  
states:

(71) Applicant: MATSUSHITA ELECTRIC

(72) Inventor: TSUDA YOSHIYUKI  
YASUI HIDEAKI  
MUKAI YUJI  
TANAKA HIROYOSHI

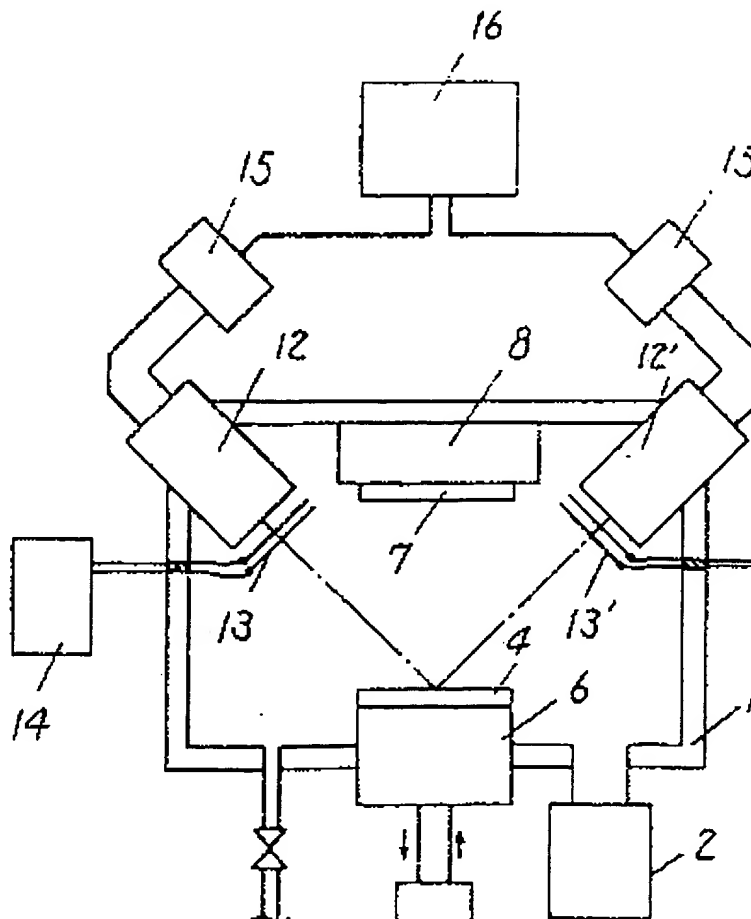
(74) Representative:

(54) ION BEAM SPUTTERING  
DEVICE AND PRODUCTION  
OF THIN MULTICOMPONENT  
FILM

(57) Abstract:

PURPOSE: To form a thin multicomponent film free from the partial nonuniformity of composition ratio by staggering the time for the production of each individual ion beam and also changing voltages to be impressed on respective ion beam-drawing systems by means of individual ion guns.

CONSTITUTION: Microwave ion guns 12, 12' and ion beam-drawing systems 13, 13' equal or larger in number to or than the number of the components of a material contained in a sputtering target 4 are placed so that they radiate from the sputtering target 4 and have prescribed angles with respect to the target surface. A beam control device 16 in which radiant mode is regulated so that ion beams from individual plural ion guns 12, 12'











are emitted intermittently and the time for the radiant mode in the individual ion guns 12, 12' is staggered is provided.

Simultaneously, drawing voltages to be impressed on the respective ion beam-drawing systems 13, 13' are changed with every ion gun.

Accordingly, the nonuniform distribution of composition ratio at the time of forming a thin multicomponent film is removed, and the thin film of stable quality can be formed.

COPYRIGHT: (C)1990,JPO&Japio

BEST AVAILABLE COPY

Delphion Intellectual Property Network	
To Search & Research	
IPN Home   Search   Order   Shopping Cart   Login   Site Map   Help	
<b>Patent Plaques</b> Recognize the achievement	 <b>JP2015168A2: ION BEAM SPUTTERING DEVICE AND PRODUCTION OF THIN MULTICOMPONENT FILM</b>
	<a href="#">View Images (1 pages)</a>   <a href="#">View INPADOC only</a>
Country:	JP Japan
Kind:	
Inventor(s):	<b>TSUDA YOSHIYUKI</b> <b>YASUI HIDEAKI</b> <b>MUKAI YUJI</b> <b>TANAKA HIROYOSHI</b>
Applicant(s):	<b>MATSUSHITA ELECTRIC IND CO LTD</b> <a href="#">News, Profiles, Stocks and More about this company</a>
Issued/Filed Dates:	Jan. 18, 1990 / July 4, 1988
Application Number:	JP1988000166151
IPC Class:	C23C 14/46;
Abstract:	<p><b>Purpose:</b> To form a thin multicomponent film free from the partial nonuniformity of composition ratio by staggering the time for the production of each individual ion beam and also changing voltages to be impressed on respective ion beam-drawing systems by means of individual ion guns.</p> <p><b>Constitution:</b> Microwave ion guns 12, 12' and ion beam-drawing systems 13, 13' equal or larger in number to or than the number of the components of a material contained in a sputtering target 4 are placed so that they radiate from the sputtering target 4 and have prescribed angles with respect to the target surface. A beam control device 16 in which radiant mode is regulated so that ion beams from individual plural ion guns 12, 12' are emitted intermittently and the time for the radiant mode in the individual ion guns 12, 12' is staggered is provided. Simultaneously, drawing voltages to be impressed on the respective ion beam-drawing systems 13, 13' are changed with every ion gun. Accordingly, the nonuniform distribution of composition ratio at the time of forming a thin multicomponent film is removed, and the thin film of stable quality can be formed.</p> <p>COPYRIGHT: (C)1990,JPO&amp;Japio</p>
Other Abstract Info:	DERABS C90-062847 DERC90-062847
Foreign References:	(No patents reference this one)
	<div> <div>Alternative Searches</div> <div>  Patent Number            Boolean Text            Advanced Text         </div> </div> <div> <div>Browse</div> <div>  U.S. Class            U.S. Class by number            TDB IBM Technical         </div> </div>
Nominate this invention for the Gallery...	